

§ 436.15

beginning of beneficial use with appropriate replacement and salvage values for each of the other alternatives; or

(ii) The lowest common multiple of the expected lives of the alternative, not to exceed 25 from the beginning of beneficial use with appropriate replacement and salvage values for each alternative.

(3) For evaluating alternative designs for a new Federal building, the study period extends from the base year through the expected life of the building or 25 years from the beginning of beneficial use, whichever is shorter.

(e) Each Federal agency shall assume that the expected life of any building energy system or building water system is the period of service without major renewal or overhaul, as estimated by a qualified engineer or architect, as appropriate, or any other reliable source except that the period of service of a building energy or water system shall not be deemed to exceed the expected life of the owned building, or the effective remaining term of the leased building (taking into account renewal options likely to be exercised).

(f) Each Federal agency may assume that investment costs are a lump sum occurring at the beginning of the base year, or may discount future investment costs to present value using the appropriate present worth factors under paragraph (a) of this section.

(g) Each Federal agency may assume that energy or water costs and non-fuel or non-water operation and maintenance costs begin to accrue at the beginning of the base year or when actually projected to occur.

(h) Each Federal agency may assume that costs occur in a lump sum at any time within the year in which they are incurred.

(i) This section shall not apply to calculations of estimated simple payback time under § 436.22 of this part.

[55 FR 48220, Nov. 20, 1990, as amended at 61 FR 32650, June 25, 1996]

§ 436.15 Formatting cost data.

In establishing cost data under §§ 436.16 and 436.17 and measuring cost effectiveness by the modes of analysis described by § 436.19 through § 436.22, a format for accomplishing the analysis which includes all required input data

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and assumptions shall be used. Subject to § 436.18(b), Federal agencies are encouraged to use worksheets or computer software referenced in the Life Cycle Cost Manual for the Federal Energy Management Program.

§ 436.16 Establishing non-fuel and non-water cost categories.

(a) The relevant non-fuel cost categories are—

(1) Investment costs;

(2) Non-fuel operation and maintenance cost;

(3) Replacement cost; and

(4) Salvage value.

(b) The relevant non-water cost categories are—

(1) Investment costs;

(2) Non-water operation and maintenance cost;

(3) Replacement cost; and

(4) Salvage value.

(c) The present value of recurring costs is the product of the base year value of recurring costs as multiplied by the appropriate uniform present worth factor under § 436.14, or as calculated by computer software indicated in § 436.18(b) and used with the official discount rate and escalation rate assumptions under § 436.14. When recurring costs begin to accrue at a later time, subtract the present value of recurring costs over the delay, calculated using the appropriate uniform present worth factor for the period of the delay, from the present value of recurring costs over the study period or, if using computer software, indicate a delayed beneficial occupancy date.

(d) The present value of non-recurring cost under § 436.16(a) is the product of the non-recurring costs as multiplied by appropriate single present worth factors under § 436.14 for the respective years in which the costs are expected to be incurred, or as calculated by computer software provided or approved by DOE and used with the official discount rate and escalation rate assumptions under § 436.14.

[55 FR 48220, Nov. 20, 1990, as amended at 61 FR 32650, June 25, 1996]

§ 436.17 Establishing energy or water cost data.

(a) Each Federal agency shall establish energy costs in the base year by